

of language, with its predecessors⁵ knowledge.

Without language there could be no progression

of culture. And unsharpened by words, the reasoning instinct would have remained very ineffective, since causal connections, other than the very simplest, can hardly be conceived until the links are defined by means of symbols.

It is difficult to imagine how we could think of heat as expanding a gas, or of $\sqrt[3]{27}$ as the cube-root of 27, unless

we possessed symbols—in words and in figures—^{to}

denote each of the conceptions involved in these ideas. Language has then assisted conscious reason. But conscious reason has created language.

Directive instinct might suggest some means of communication by signs or sounds, and it certainly appears that many animals can give practical

information to others of their kind. The use of language, however, goes far beyond this: it enables men to share abstract ideas, and above all things, to instruct one another as to causes. It

has progressed by the detection and isolation of qualities or properties, and by the attribution

to each quality of its distinctive effects. A

developed is distinguished from a rudimentary tongue by the provision of separate words to express stages of becoming or acting which are not detected by the uncultured mind. The

embryonic stage of language has already been illustrated from South America, where tribes have not isolated, for instance, the idea of "

washing."

and use separate single words to express washing their bodies and washing their clothes.

Nor must we forget the effect of writing and printing in spreading culture, and in securing it against the accidents of time and human destructiveness. In past ages how many buds have been put forth by human aspiration only to be frostbitten, overwhelmed, or deliberately cut back!